

(12) **UK Patent Application** (19) **GB** (11) **2 267 651 A** (13)
 (43) Date of A publication 15.12.1993

(21) Application No 9210935.4

(22) Date of filing 22.05.1992

(71) Applicant
 Francis Joseph Turner
 55 Fearnhead Lane, Fearnhead, Warrington, WA2 0BQ,
 United Kingdom

(72) Inventor
 Francis Joseph Turner

(74) Agent and/or Address for Service
 Francis Joseph Turner
 55 Fearnhead Lane, Fearnhead, Warrington, WA2 0BQ,
 United Kingdom

(51) INT CL⁶
 A63B 9/00

(52) UK CL (Edition L)
 A6M MBL

(56) Documents cited
 None

(58) Field of search
 UK CL (Edition L) A6M MBL
 INT CL⁶ A63B 9/00

(54) Removable climbing wall hold

(57) A removable climbing wall hold system involving a climbing wall block hold 1 and means of producing side pressure 6 to retain it within an aperture 3. The aperture may be within either a wall 7 or a purpose made container 12 located within a wall or any suitable surface. Side pressure may be produced by an expansion bolt 4 within blocks 5 or via a nut 10 and bolt 11 through opposing wedges 8, 9. The nut may be on the base of either the wedge or container. A wedge shaped climbing block, on one side, will dispense with the adjacent wedge. A fixed stub 14 in the container's side, locating in a hole in the block hold, can provide extra security for the side opposite to the pressure device, and the container, can be wedge shaped. An inner spring 13, behind the wedge, will aid wedge removal.

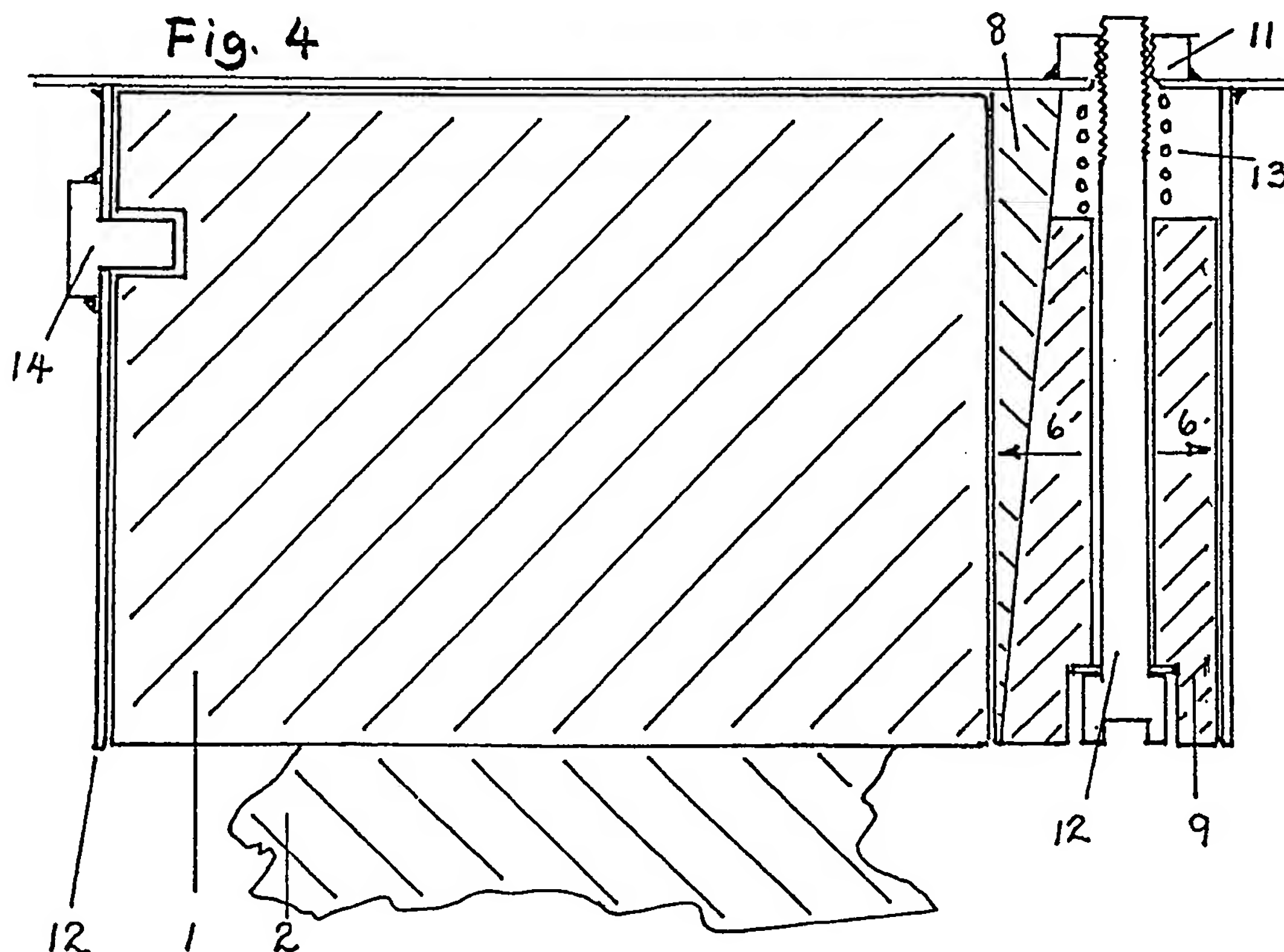


Fig. 1

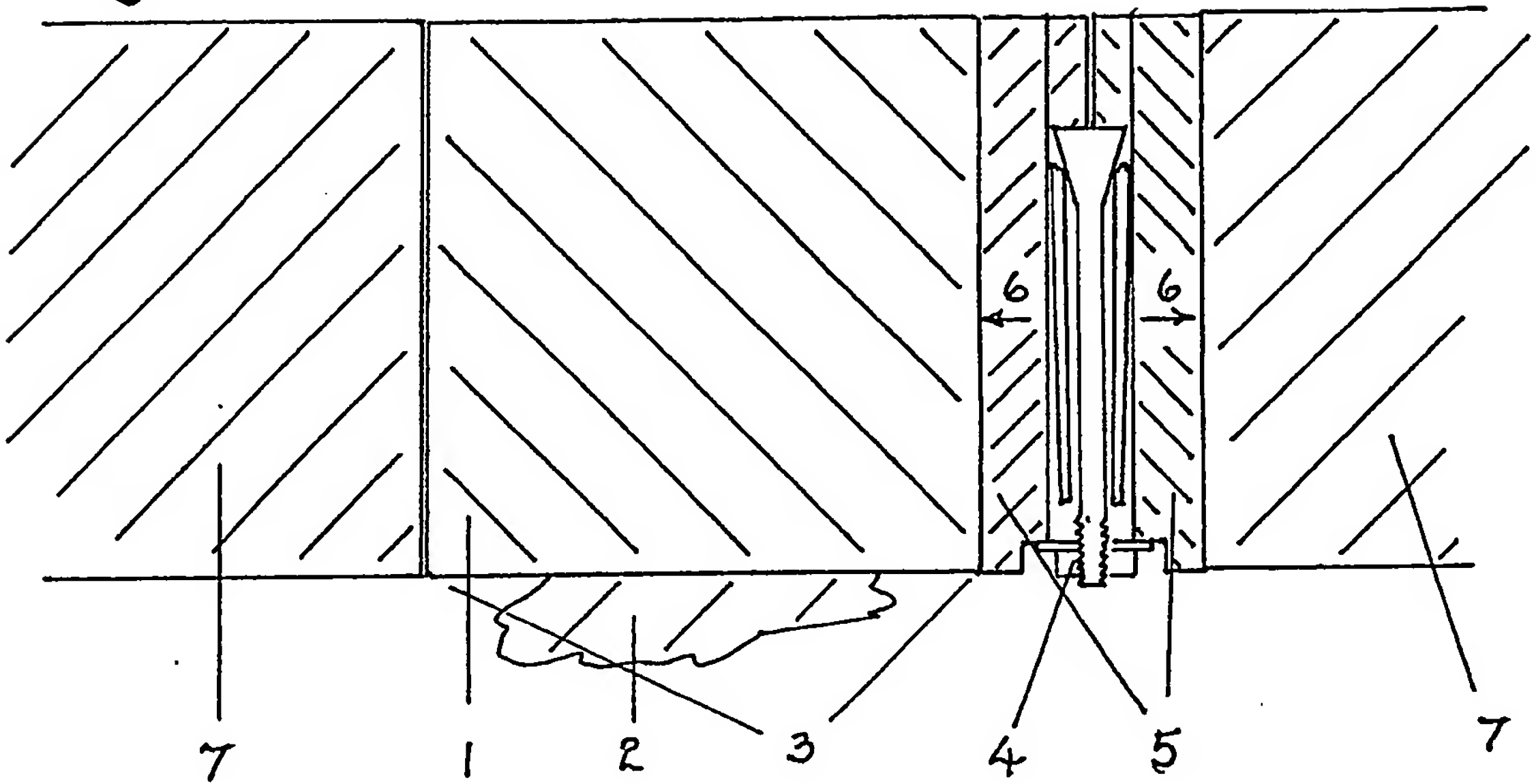


Fig. 2

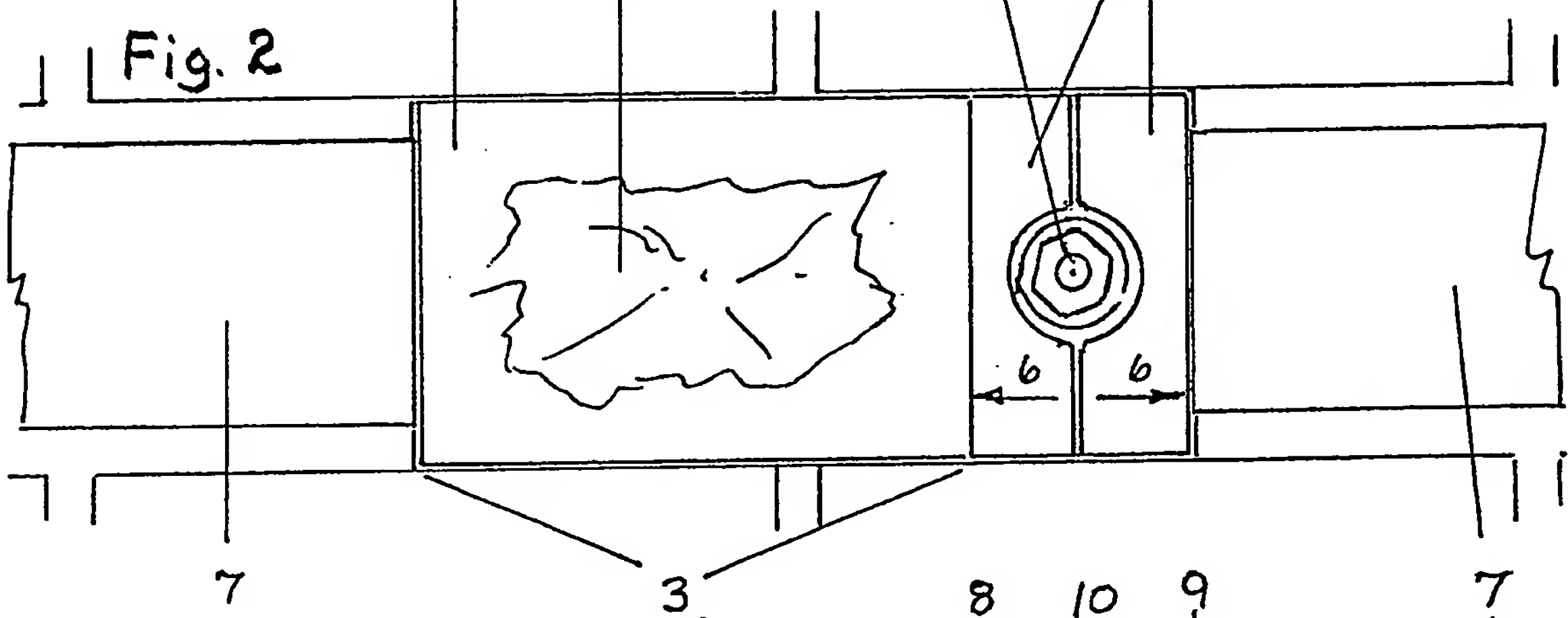


Fig. 3

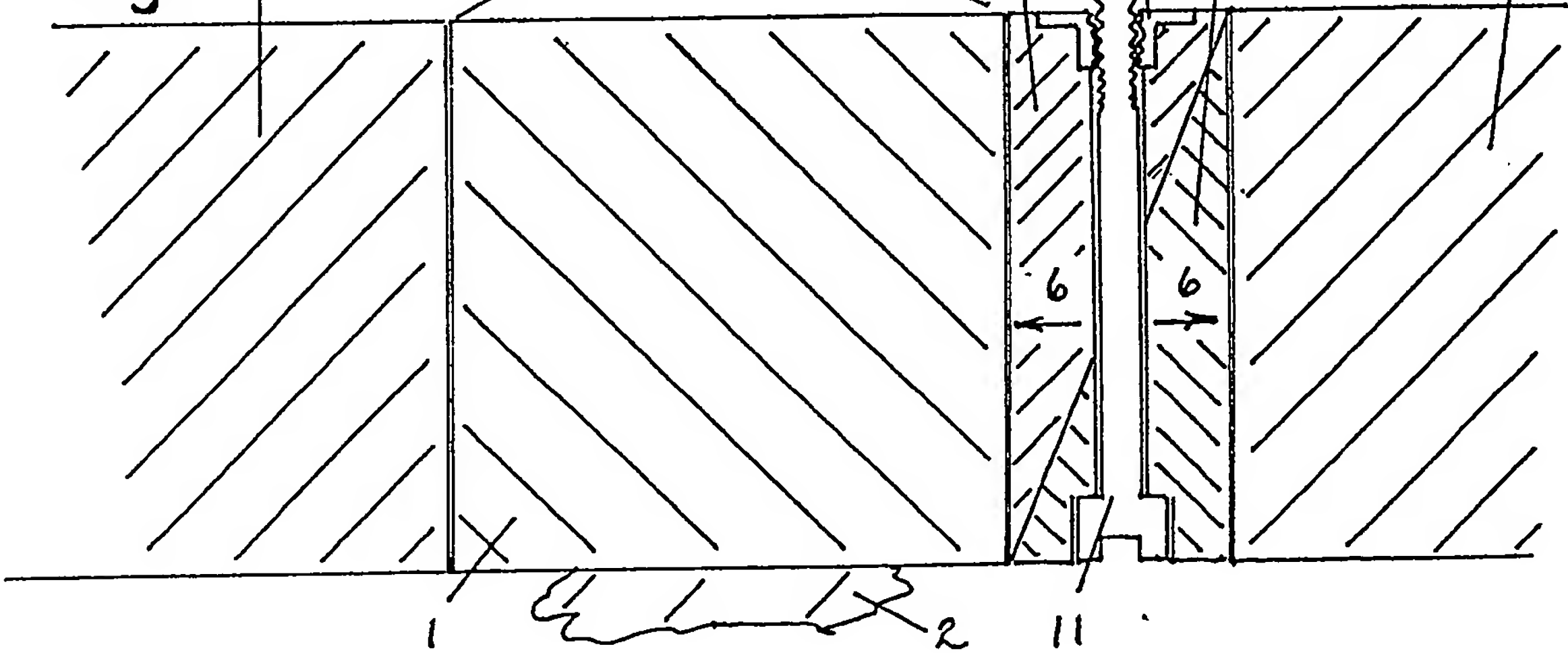


Fig. 4

-2/2-

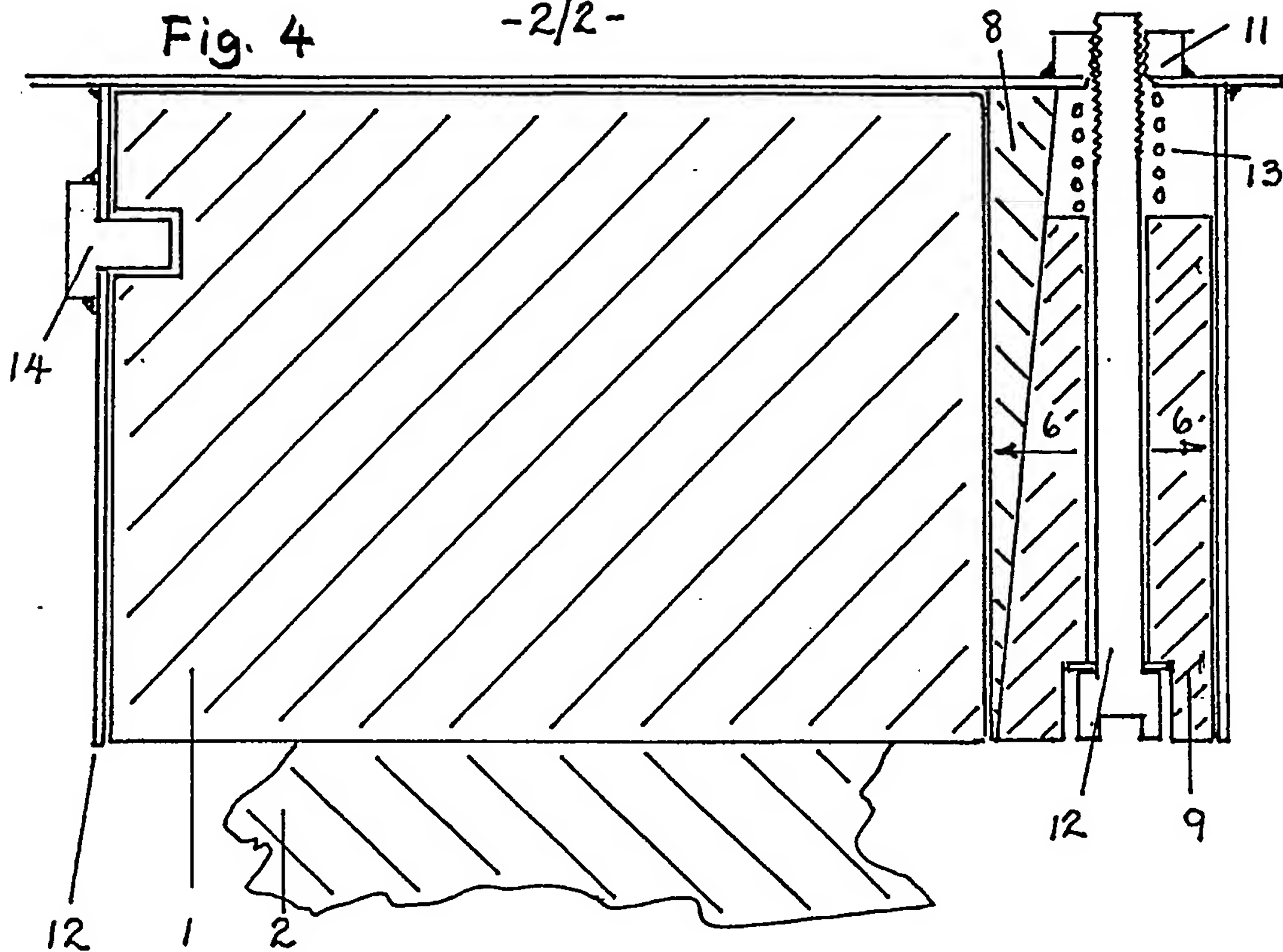
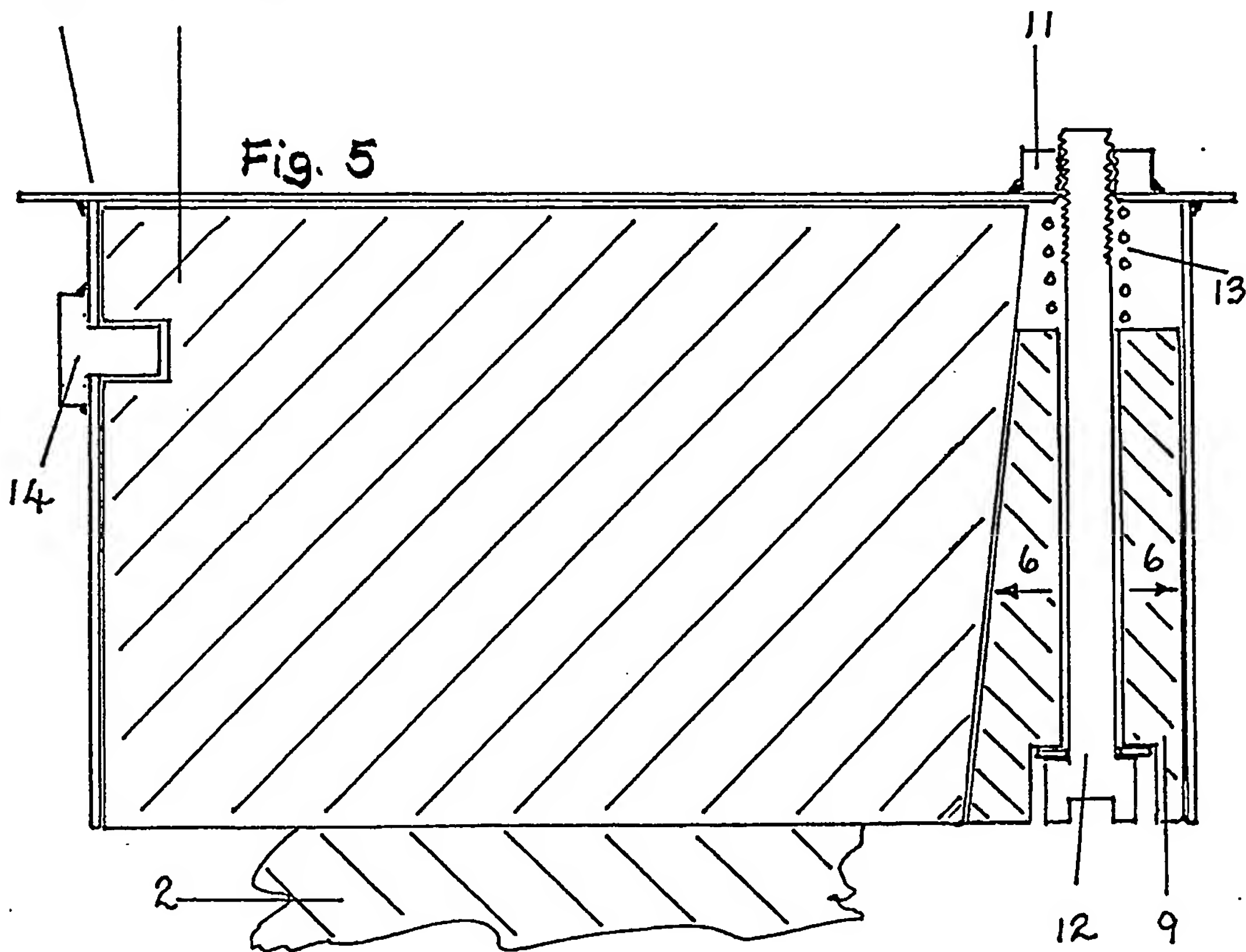


Fig. 5



REMOVABLE CLIMBING WALL HOLD

This invention relates to a system of removable climbing wall holds.

Climbing walls are facilities constructed in, for instance, sports centres on which climbers practice their skills.

Several methods of providing the climbing wall holds are in use. For instance, natural rock can be cast into, and protruding from, a concrete block which is then fixed permanently (mortared) into a wall. Other holds are made from a resin or resin/grit mixture which can be spread unevenly on a board surface or cast as a moulded block which is then bolted onto a suitable surface. Natural rock can also be cast into, and protruding from, a resin/grit block and thus be bolted on in the same manner. A further method, used in the 60's and 70's, was to provide a metal box which was incorporated into a brick wall. Into this box was inserted a close fitting, and protruding, wooden block. This block was secured by means of a long steel bolt which passed through its centre and entered a nut fixed to the base of the box.

Thus, the standard method of securing a removable climbing wall hold was, and still is, by means of a bolt through the hold into a suitable surface.

The use of a bolt, however, has two disadvantages. Firstly, the design is compromised by the presence of the bolt hole in the central region. This is especially so in the case of casting natural rock holds of any appreciable size in a resin/grit block. Secondly, the compressive action of the bolt is concentrated on a small, central area of the block so over tightening can cause damage to the material or under tightening can allow the hold to rotate during use.

According to the present invention there is provided a removable climbing wall hold system which locates within an aperture, involving a climbing wall block hold and means of applying side pressure to retain it in position.

Special embodiments of the invention will now be described by way of examples with reference to the accompanying drawings in which:-

Figure 1 shows, in plan view, a removable climbing wall block hold and pressure device located in an aperture in a wall; and

Figure 2 shows a front view of the same arrangement;

Figure 3 shows a plan view of an arrangement wherein the pressure is provided by a wedge system;

Figure 4 shows, in plan view, a modified arrangement of the design shown in fig. 3 involving a purpose made box to contain the block and modified wedge system and includes a security stub; and

Figure 5 shows the same arrangement but with a modified block shape.

Referring to the drawings the system involves a climbing wall block 1 with a rock hold 2 being held firmly within an aperture 3 by one of a variety of means.

In Fig. 1 the system is contained within an aperture in a wall and shows an expansion bolt 4 within a split block of suitable material 5, e.g. hard wood, being used as the means of applying the side pressure as shown by the direction of the arrows 6. Fig. 2 shows the arrangement, in frontal view, within a brick wall 7.

Fig. 3 shows a plan view of a similar arrangement to that in Fig. 1 and 2 but the pressure device used is now a pair of opposing wedges 8 and 9 which are activated by a nut 10 and bolt 11.

Fig. 4 shows, in plan view, a modified arrangement wherein the climbing wall block and wedge device are contained within a purpose made metal box 12 (although other materials e.g. moulded plastic, may be suitable); the box being fixed into the wall. The nut, in this case, is located on the base of the box. Further additions are the spring 13, to aid the release of the wedge, and the stub 14 to locate in a hole in the block to provide extra security.

Fig. 5 shows a similar arrangement to Fig. 4 but, in this case, the wedge 8 adjacent to the block is dispensed with and the space it occupied is now taken up by the block itself having a wedge shape. It is also possible to dispense with the security stub and make that side of the containing box, and that side of the climbing wall block, also wedge shaped (not shown).

CLAIMS

- 1 A removable climbing wall hold system, which locates within an aperture, involving a climbing wall block hold and means of applying side pressure (hereafter referred to as the 'pressure device') to retain it in position.
- 2 A removable climbing wall hold system, as claimed in Claim 1, whereby the side pressure is produced via the tightening of an expansion bolt located within blocks of suitable material.
- 3 A removable climbing wall hold system, as claimed in Claim 1, whereby the side pressure is produced via the tightening of a nut and bolt, the bolt passing through opposing wedges of suitable material.
- 4 A removable climbing wall hold system, as claimed in Claim 2 or 3, wherein the climbing wall block hold and pressure device are contained within a purpose made container.
- 5 A removable climbing wall hold system, as claimed in Claim 4, wherein the purpose made container is fitted with means of attaching it securely to a thin supporting surface.
- 6 A removable climbing wall hold system, as claimed in Claim 3 and 4, wherein the nut is located on the base of a wedge.
- 7 A removable climbing wall hold system, as claimed in Claim 3 and 4, wherein the nut is located on the base of the container.
- 8 A removable climbing wall hold system, as claimed in Claim 7, wherein the wedge adjacent to the climbing wall block hold is dispensed with and its position is taken up by having an equivalent wedge shape on the climbing wall block hold.
- 9 A removable climbing wall hold system, as claimed in Claim 8, but with the addition of a wedge shape on both container and climbing wall block hold on the side opposite to the pressure device.
- 10 A removable climbing wall hold system, as claimed in Claim 7 and 8, wherein a spring is fitted at the base of the wedge arrangement to aid removal of the wedge.
- 11 A removable climbing wall hold system, as claimed in Claim 4, wherein a stud, e.g. a steel bolt, is fitted in a side of the container other than the pressure device side. The stud then locates in a hole in the climbing wall block hold thereby acting as an additional retaining device.
- 12 A removable climbing wall hold system substantially as claimed herein with reference to Figures 1 - 5 of the accompanying drawings.

Patents Act 1977
Examiner's report to the Comptroller under
Section 17 (The Search Report)

Application number

GB 9210935.4

Relevant Technical fields

(i) UK CI (Edition L) A6M (MBL)

(ii) Int CI (Edition 5) A63B 9/00

Search Examiner

A T BLUNT

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search

2 AUGUST 1993

Documents considered relevant following a search in respect of claims 1-12

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
	NONE	

-5-

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).